APPENDIX G

Section 9

Outfall 009, September 22, 2007

MEC^X Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX, LLC
12260 East Vassar Drive
Suite 500
Lakewood, CO 80226

Laboratory Vista Analytical
Reviewer E. Wessling
Analysis/Method Dioxins/Furans

Package ID IQI2054
Task Order 1261.100D.00 001
SDG No. IQI2054
No. of Analyses 1

Date: Oct. 31, 2007
Reviewer's Signature

ACTION ITEMS[a]	
. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	Qualifications were assigned for the following:
Holding Times	- EMPC values were qualified as estimated nondetects
GC/MS Tune/Inst. Performance	
Calibration	- Estimated values between the RL and EDL qualified DNQ
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	

COMMENTS[b]	

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC[X]
12269 East Vassar Drive
Aurora, CO 80014

Task Order: 1261.100D.00
SDG No.: IQI2054
No. of Analyses: 1

Laboratory: TesAmerica, Weck
Reviewer: P. Meeks
Analysis/Method: Metals, General Minerals

Date: October 21, 2007
Reviewer's Signature

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	Detects below the reporting limit qualified as estimated.
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS[b]	

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IQI2054

Prepared by

MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	IQI2054
Project Manager:	P. Costa
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 009	IQI2054-01	7092404-01	Water	9/22/07 1249	160.2, 314.0, 245.1, 6020, 1613

II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine and the sub-laboratory, Weck, within the temperature limits of 4°C ±2°C. The sample was received at the sub-laboratory, Vista, below the temperature limit at 0.4°C; however, as the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative for this SDG, the sample was received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon arrival at sub-laboratories, Weck and Vista. The client ID was added to the sample result summaries by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: E. Wessling
Date Reviewed: 10/21/2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (8/02).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.

- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. No adverse affect was observed with this practice. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

    - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.

    - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.

- Blanks: The method blank had a detect for OCDD above the EDL; however, the concentration reported in the sample exceeded five times the concentration reported in the method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. Total PeCDF was qualified as an estimated nondetect, "UJ," as the EMPC value did not meet the identification criteria.

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Any detect below the laboratory lower calibration level was qualified as estimated, "J." These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. Nondetects are valid to the estimated detection limit (EDL).

B. EPA METHODS 6020 & 7470A—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: October 21, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Methods 6020 and 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The analytical holding times, six months for metals and 28 days for mercury, were met.

- Tuning: The mass calibration and resolution checks criteria were met. All tuning solution %RSDs were ≤5%, and all masses of interest were calibrated to ≤ 0.1 amu and ≤0.9 amu at 10% peak height.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110% for the ICP-MS metals and 85-115% for mercury.

- Blanks: There were no applicable detects in the method blanks or CCBs.

- Interference Check Samples: Recoveries were within the method-established control limits. Cadmium was detected in the ICSA solution at 2.8 µg/L; however, the reviewer could not determine if the concentration was indicative of matrix interference.

- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on the sample in this SDG. All recoveries and RPDs were within the laboratory-established control limits.

- Serial Dilution: No serial dilution analyses were performed.

- Internal Standards Performance: All sample internal standard intensities were within 30-120% of the internal standard intensities measured in the initial calibration. All CCV and CCB internal standard intensities were within 80-120% of the internal standard intensities measured in the initial calibration.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: October 21, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 160.2 and 314.0*, and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The analytical holding times, 7 days for TSS and 28 days for perchlorate, were met.

- Calibration: Calibration criteria were met. Perchlorate initial calibration r^2 values were ≥0.995 and all initial and continuing calibration, ICCS, and IPC recoveries were within 90-110%. The IPC-MA was recovered within 85-115%.

- Blanks: Method blanks and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Reported nondetects are valid to the reporting limit.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

Sample ID:	IQI2054-01 Outfall 009				EPA Method 1613

Client Data		Sample Data		Laboratory Data			
Name:	TestAmerica	Matrix:	Aqueous	Lab Sample:	29590-001	Date Received:	25-Sep-07
Project:	IQI2054	Sample Size:	0.979 L	QC Batch No.:	9453	Date Extracted:	6-Oct-07
Date Collected:	22-Sep-07			Date Analyzed DB-5:	8-Oct-07	Date Analyzed DB-225:	NA
Time Collected:	1249						

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND U	0.00000152		
1,2,3,7,8-PeCDD	0.00000312 J/DNQ			J
1,2,3,4,7,8-HxCDD	0.00000477			J
1,2,3,6,7,8-HxCDD	0.00000913			J
1,2,3,7,8,9-HxCDD	0.00000827			J
1,2,3,4,6,7,8-HpCDD	0.000231			
OCDD	0.00378			B
2,3,7,8-TCDF	ND U	0.00000214		
1,2,3,7,8-PeCDF	ND	0.00000236		
2,3,4,7,8-PeCDF	ND	0.00000231		
1,2,3,4,7,8-HxCDF	ND	0.00000336		
1,2,3,6,7,8-HxCDF	ND	0.00000318		
2,3,4,6,7,8-HxCDF	ND	0.00000340		
1,2,3,7,8,9-HxCDF	ND	0.00000464		
1,2,3,4,6,7,8-HpCDF	0.0000425			
1,2,3,4,7,8,9-HpCDF	ND U	0.00000594		
OCDF	0.000137			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.8	25 - 164	
	13C-1,2,3,7,8-PeCDD	92.4	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	79.0	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	91.7	23 - 140	
	13C-OCDD	82.2	17 - 157	
	13C-2,3,7,8-TCDF	89.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	96.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	95.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	77.2	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	72.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	72.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	78.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	78.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	91.7	26 - 138	
	13C-OCDF	81.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.4	35 - 197	

Totals			
Total TCDD	ND U	0.00000152	
Total PeCDD	0.00000312		
Total HxCDD	0.0000529		0.0000753
Total HpCDD	0.000659		
Total TCDF	ND U	0.00000214	
Total PeCDF	ND U J/* [illegible]		0.00000854
Total HxCDF	0.0000326		0.0000387
Total HpCDF	0.000109		

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Level IV

Approved By: Martha M. Maier 09-Oct-2007 13:15

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

METALS

Analyte		Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water)										
Reporting Units: ug/l										
Antimony	J/DNQ	EPA 200.8	7I24068	0.20	2.0	**0.86**	1	09/24/07	09/25/07	J
Cadmium	J/DNQ	EPA 200.8	7I24068	0.11	1.0	**0.15**	1	09/24/07	09/25/07	J
Copper		EPA 200.8	7I24068	0.75	2.0	**9.9**	1	09/24/07	09/25/07	
Lead		EPA 200.8	7I24068	0.10	1.0	**8.6**	1	09/24/07	09/25/07	
Thallium	U	EPA 200.8	7I24068	0.15	1.0	ND	1	09/24/07	09/25/07	

LEVEL IV

TestAmerica - Irvine, CA

Joseph Doak
Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 009

Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

Metals by EPA 200 Series Methods

Analyte		Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water) - cont.										
Reporting Units: ug/l										
Mercury, Dissolved	U	EPA 245.1	W7I1160	0.025	0.10	ND	1	09/27/07	09/27/07	
Mercury, Total	U	EPA 245.1	W7I1160	0.025	0.10	ND	1	09/27/07	09/27/07	

LEVEL IV

TestAmerica - Irvine, CA

Joseph Doak
Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 009
Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Chloride *	EPA 300.0	7I24057	0.25	0.50	**6.4**	1	09/24/07	09/24/07	
Nitrate/Nitrite-N	EPA 300.0	7I24057	0.15	0.26	**1.3**	1	09/24/07	09/24/07	
Oil & Grease	EPA 413.1	7I25056	1.2	5.0	**1.2**	1	09/25/07	09/25/07	J
Sulfate	EPA 300.0	7I24057	0.20	0.50	**25**	1	09/24/07	09/24/07	
Total Dissolved Solids	SM2540C	7I24104	10	10	**160**	1	09/24/07	09/24/07	
Total Suspended Solids	EPA 160.2	7I24119	10	10	**99**	1	09/24/07	09/24/07	
Sample ID: IQI2054-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Perchlorate U	EPA 314.0	7J03062	1.5	4.0	ND	1	10/03/07	10/04/07	

* Analysis not validated

LEVEL IV

TestAmerica - Irvine, CA

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Project Manager

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APPENDIX G

Section 10

Outfall 009, September 22, 2007

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project: Routine Outfall 009

Sampled: 09/22/07
Received: 09/22/07
Issued: 10/16/07 09:26

NELAP #01108CA California ELAP#1197 CSDLAC #10256

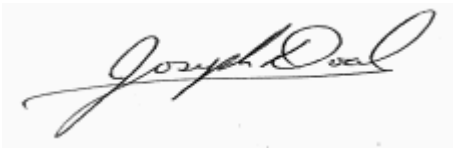
The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
IQI2054-01	Outfall 009	Water

Reviewed By:



TestAmerica - Irvine, CA

Joseph Doak
Project Manager

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 009
Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	7I24068	0.20	2.0	**0.86**	1	09/24/07	09/25/07	J
Cadmium	EPA 200.8	7I24068	0.11	1.0	**0.15**	1	09/24/07	09/25/07	J
Copper	EPA 200.8	7I24068	0.75	2.0	**9.9**	1	09/24/07	09/25/07	
Lead	EPA 200.8	7I24068	0.10	1.0	**8.6**	1	09/24/07	09/25/07	
Thallium	EPA 200.8	7I24068	0.15	1.0	ND	1	09/24/07	09/25/07	

TestAmerica - Irvine, CA

Joseph Doak
Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 009
Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	7I24099	0.20	2.0	**0.78**	1	09/24/07	09/25/07	J
Cadmium	EPA 200.8-Diss	7I24099	0.11	1.0	ND	1	09/24/07	09/25/07	
Copper	EPA 200.8-Diss	7I24099	0.75	2.0	**6.0**	1	09/24/07	09/25/07	
Lead	EPA 200.8-Diss	7I24099	0.10	1.0	**0.87**	1	09/24/07	09/25/07	J
Thallium	EPA 200.8-Diss	7I24099	0.15	1.0	ND	1	09/24/07	09/25/07	

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Project Manager

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 009
Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	7I24057	0.25	0.50	**6.4**	1	09/24/07	09/24/07	
Nitrate/Nitrite-N	EPA 300.0	7I24057	0.15	0.26	**1.3**	1	09/24/07	09/24/07	
Oil & Grease	EPA 413.1	7I25056	1.2	5.0	**1.2**	1	09/25/07	09/25/07	J
Sulfate	EPA 300.0	7I24057	0.20	0.50	**25**	1	09/24/07	09/24/07	
Total Dissolved Solids	SM2540C	7I24104	10	10	**160**	1	09/24/07	09/24/07	
Total Suspended Solids	EPA 160.2	7I24119	10	10	**99**	1	09/24/07	09/24/07	
Sample ID: IQI2054-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	7J03062	1.5	4.0	ND	1	10/03/07	10/04/07	

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Received: 09/22/07

Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2054-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W7I1160	0.025	0.10	ND	1	09/27/07	09/27/07	
Mercury, Total	EPA 245.1	W7I1160	0.025	0.10	ND	1	09/27/07	09/27/07	

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Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 009 (IQI2054-01) - Water					
EPA 300.0	2	09/22/2007 12:49	09/22/2007 16:07	09/24/2007 07:00	09/24/2007 11:17

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Received: 09/22/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24068 Extracted: 09/24/07											
Blank Analyzed: 09/25/2007 (7I24068-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 09/25/2007 (7I24068-BS1)											
Antimony	75.5	2.0	0.20	ug/l	80.0		94	85-115			
Cadmium	76.0	1.0	0.11	ug/l	80.0		95	85-115			
Copper	83.3	2.0	0.75	ug/l	80.0		104	85-115			
Lead	80.6	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	80.9	1.0	0.15	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 09/25/2007 (7I24068-MS1)						**Source: IQI2054-01**					
Antimony	74.0	2.0	0.20	ug/l	80.0	0.858	91	70-130			
Cadmium	75.2	1.0	0.11	ug/l	80.0	0.147	94	70-130			
Copper	90.5	2.0	0.75	ug/l	80.0	9.93	101	70-130			
Lead	88.1	1.0	0.10	ug/l	80.0	8.55	99	70-130			
Thallium	81.2	1.0	0.15	ug/l	80.0	ND	101	70-130			
Matrix Spike Dup Analyzed: 09/25/2007 (7I24068-MSD1)						**Source: IQI2054-01**					
Antimony	73.9	2.0	0.20	ug/l	80.0	0.858	91	70-130	0	20	
Cadmium	76.0	1.0	0.11	ug/l	80.0	0.147	95	70-130	1	20	
Copper	92.6	2.0	0.75	ug/l	80.0	9.93	103	70-130	2	20	
Lead	89.4	1.0	0.10	ug/l	80.0	8.55	101	70-130	1	20	
Thallium	82.0	1.0	0.15	ug/l	80.0	ND	102	70-130	1	20	

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Attention: Bronwyn Kelly

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Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24099 Extracted: 09/24/07											
Blank Analyzed: 09/25/2007 (7I24099-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 09/25/2007 (7I24099-BS1)											
Antimony	81.7	2.0	0.20	ug/l	80.0		102	85-115			
Cadmium	82.4	1.0	0.11	ug/l	80.0		103	85-115			
Copper	72.0	2.0	0.75	ug/l	80.0		90	85-115			
Lead	74.9	1.0	0.10	ug/l	80.0		94	85-115			
Thallium	80.2	1.0	0.15	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 09/25/2007 (7I24099-MS1)						**Source: IQI2054-01**					
Antimony	83.3	2.0	0.20	ug/l	80.0	0.779	103	70-130			
Cadmium	81.3	1.0	0.11	ug/l	80.0	ND	102	70-130			
Copper	78.1	2.0	0.75	ug/l	80.0	5.99	90	70-130			
Lead	71.5	1.0	0.10	ug/l	80.0	0.869	88	70-130			
Thallium	78.1	1.0	0.15	ug/l	80.0	ND	98	70-130			
Matrix Spike Dup Analyzed: 09/25/2007 (7I24099-MSD1)						**Source: IQI2054-01**					
Antimony	84.7	2.0	0.20	ug/l	80.0	0.779	105	70-130	2	20	
Cadmium	83.9	1.0	0.11	ug/l	80.0	ND	105	70-130	3	20	
Copper	83.2	2.0	0.75	ug/l	80.0	5.99	97	70-130	6	20	
Lead	81.6	1.0	0.10	ug/l	80.0	0.869	101	70-130	13	20	
Thallium	79.9	1.0	0.15	ug/l	80.0	ND	100	70-130	2	20	

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Routine Outfall 009
Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24057 Extracted: 09/24/07											
Blank Analyzed: 09/24/2007 (7I24057-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 09/24/2007 (7I24057-BS1)											
Chloride	4.85	0.50	0.25	mg/l	5.00		97	90-110			
Sulfate	9.78	0.50	0.20	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 09/24/2007 (7I24057-MS1)						**Source: IQI2057-01**					
Chloride	8.67	0.50	0.25	mg/l	5.00	4.37	86	80-120			
Sulfate	20.5	0.50	0.20	mg/l	10.0	11.3	92	80-120			
Matrix Spike Dup Analyzed: 09/24/2007 (7I24057-MSD1)						**Source: IQI2057-01**					
Chloride	8.64	0.50	0.25	mg/l	5.00	4.37	85	80-120	0	20	
Sulfate	20.5	0.50	0.20	mg/l	10.0	11.3	92	80-120	0	20	
Batch: 7I24104 Extracted: 09/24/07											
Blank Analyzed: 09/24/2007 (7I24104-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 09/24/2007 (7I24104-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 09/24/2007 (7I24104-DUP1)						**Source: IQI1891-01**					
Total Dissolved Solids	359	10	10	mg/l		356			1	10	

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Report Number: IQI2054

Sampled: 09/22/07
Received: 09/22/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24119 Extracted: 09/24/07											
Blank Analyzed: 09/24/2007 (7I24119-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 09/24/2007 (7I24119-BS1)											
Total Suspended Solids	1040	10	10	mg/l	1000		104	85-115			
Duplicate Analyzed: 09/24/2007 (7I24119-DUP1)						**Source: IQI2064-01**					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 7I25056 Extracted: 09/25/07											
Blank Analyzed: 09/25/2007 (7I25056-BLK1)											
Oil & Grease	ND	5.0	1.2	mg/l							
LCS Analyzed: 09/25/2007 (7I25056-BS1)											**MNR1**
Oil & Grease	20.2	5.0	1.2	mg/l	20.0		101	65-120			
LCS Dup Analyzed: 09/25/2007 (7I25056-BSD1)											
Oil & Grease	20.0	5.0	1.2	mg/l	20.0		100	65-120	1	20	
Batch: 7J03062 Extracted: 10/03/07											
Blank Analyzed: 10/03/2007 (7J03062-BLK1)											
Perchlorate	ND	4.0	1.5	ug/l							
LCS Analyzed: 10/03/2007 (7J03062-BS1)											
Perchlorate	51.7	4.0	1.5	ug/l	50.0		103	85-115			

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Sampled: 09/22/07
Received: 09/22/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7J03062 Extracted: 10/03/07											
Matrix Spike Analyzed: 10/03/2007 (7J03062-MS1)						**Source: IQI2029-08**					
Perchlorate	47.0	4.0	1.5	ug/l	50.0	ND	94	80-120			
Matrix Spike Dup Analyzed: 10/03/2007 (7J03062-MSD1)						**Source: IQI2029-08**					
Perchlorate	49.7	4.0	1.5	ug/l	50.0	ND	99	80-120	6	20	

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METHOD BLANK/QC DATA

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: W7I1160 Extracted: 09/27/07											
Blank Analyzed: 09/27/2007 (W7I1160-BLK1)											
Mercury, Dissolved	ND	0.10	0.025	ug/l							
Mercury, Total	ND	0.10	0.025	ug/l							
LCS Analyzed: 09/27/2007 (W7I1160-BS1)											
Mercury, Dissolved	1.05	0.10	0.025	ug/l	1.00		105	85-115			
Mercury, Total	1.05	0.10	0.025	ug/l	1.00		105	85-115			
Matrix Spike Analyzed: 09/27/2007 (W7I1160-MS1)						**Source: 7092457-10**					
Mercury, Dissolved	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
Mercury, Total	1.07	0.10	0.025	ug/l	1.00	ND	107	70-130			
Matrix Spike Analyzed: 09/27/2007 (W7I1160-MS2)						**Source: 7092457-11**					
Mercury, Dissolved	1.04	0.10	0.025	ug/l	1.00	ND	104	70-130			
Mercury, Total	1.04	0.10	0.025	ug/l	1.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 09/27/2007 (W7I1160-MSD1)						**Source: 7092457-10**					
Mercury, Dissolved	1.05	0.10	0.025	ug/l	1.00	ND	105	70-130	2	20	
Mercury, Total	1.05	0.10	0.025	ug/l	1.00	ND	105	70-130	2	20	
Matrix Spike Dup Analyzed: 09/27/2007 (W7I1160-MSD2)						**Source: 7092457-11**					
Mercury, Dissolved	1.04	0.10	0.025	ug/l	1.00	ND	104	70-130	0	20	
Mercury, Total	1.04	0.10	0.025	ug/l	1.00	ND	104	70-130	0	20	

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Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IQI2054-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.20	5.0	15
IQI2054-01	Antimony-200.8	Antimony	ug/l	0.86	2.0	6.00
IQI2054-01	Antimony-200.8, Diss	Antimony	ug/l	0.78	2.0	6.00
IQI2054-01	Cadmium-200.8	Cadmium	ug/l	0.15	1.0	4.00
IQI2054-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.076	1.0	4.00
IQI2054-01	Chloride - 300.0	Chloride	mg/l	6.45	0.50	150
IQI2054-01	Copper-200.8	Copper	ug/l	9.93	2.0	14
IQI2054-01	Copper-200.8, Diss	Copper	ug/l	5.99	2.0	14
IQI2054-01	**Lead-200.8**	**Lead**	**ug/l**	**8.55**	**1.0**	**5.20**
IQI2054-01	Lead-200.8, Diss	Lead	ug/l	0.87	1.0	5.20
IQI2054-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.27	0.26	10.00
IQI2054-01	Sulfate-300.0	Sulfate	mg/l	25	0.50	250
IQI2054-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	156	10	850
IQI2054-01	Thallium-200.8	Thallium	ug/l	0.14	1.0	2.00
IQI2054-01	Thallium-200.8, Diss	Thallium	ug/l	0.014	1.0	2.00

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DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 413.1	Water	X	X
SM2540C	Water	X	X

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Subcontracted Laboratories

Vista Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*
1104 Windfield Way - El Dorado Hills, CA 95762
Analysis Performed: 1613-Dioxin-HR-Alta
Samples: IQI2054-01

Weck Laboratories, Inc
14859 E. Clark Avenue - City of Industry, CA 91745
Method Performed: EPA 245.1
Samples: IQI2054-01

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IQI2054

Del Mar Analytical Version 04/28/06 CHAIN OF CUSTODY FORM

IQI2054

Client Name/Address:	Project:
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Boeing-SSFL NPDES **Routine Outfall 009** Stormwater at WS-13
Project Manager: Bronwyn Kelly Sampler: Pat Lock	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle * #	ANALYSIS REQUIRED: Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl				Comments
Outfall 009	W	Poly-1L	1	9-22-07 12:49	HNO3	1A	X									Field readings Temp = 66.8 pH = 6.89 collected @ 12:49
Outfall 009-Dup	W	Poly-1L	1		HNO3	1B	X									
Outfall 009	W	Amber-1L	2		None	2A, 2B		X								
Outfall 009	W	Amber-1L	2		HCl	3A, 3B			X							
Outfall 009	W	Poly-500 ml	2		None	4A,4B				X						
Outfall 009	W	Poly-500 ml	2		None	5A, 5B					X					
Outfall 009	W	Poly-1L	1		None	6						X				Filter w/in 24hr of receipt at lab

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	9-22-07	[signature]	9/22/07 1342
[signature]	9/22/07 1607		
		~~Received By~~ [signature]	9/22/07 1607
Relinquished By	Date/Time:	~~Received By~~	Date/Time:

Turn around Time: (check)
24 Hours X 5 Days
48 Hours ____ 10 Days
72 Hours ____ Normal
Perchlorate Only 72 Hours____
Metals Only 72 Hours____
Sample Integrity: (Check)
Intact ✓ On Ice: ✓

NPDES-411

Vista
Analytical Laboratory

October 09, 2007

Vista Project I.D.: 29590

Mr. Nicholas Marz
TestAmerica
17461 Derian Ave.
Suite 100
Irvine, CA 92614

Dear Mr. Marz,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on September 25, 2007 under your Project Name "IQI2054". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Section I: Sample Inventory Report

Date Received: **9/25/2007**

Vista Lab. ID	Client Sample ID
29590-001	IQI2054-01

SECTION II

Method Blank **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9453	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	6-Oct-07	Date Analyzed DB-5:	9-Oct-07
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000567		
1,2,3,7,8-PeCDD	ND	0.000000789		
1,2,3,4,7,8-HxCDD	ND	0.00000150		
1,2,3,6,7,8-HxCDD	ND	0.000000769		
1,2,3,7,8,9-HxCDD	ND	0.000000741		
1,2,3,4,6,7,8-HpCDD	ND	0.00000168		
OCDD	0.0000168			J
2,3,7,8-TCDF	ND	0.000000781		
1,2,3,7,8-PeCDF	ND	0.000000768		
2,3,4,7,8-PeCDF	ND	0.000000724		
1,2,3,4,7,8-HxCDF	ND	0.00000102		
1,2,3,6,7,8-HxCDF	ND	0.000000993		
2,3,4,6,7,8-HxCDF	ND	0.00000106		
1,2,3,7,8,9-HxCDF	ND	0.00000140		
1,2,3,4,6,7,8-HpCDF	ND	0.00000208		
1,2,3,4,7,8,9-HpCDF	ND	0.00000199		
OCDF	ND	0.00000225		

Labeled Standard		%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	25 - 164	
	13C-1,2,3,7,8-PeCDD	108	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	99.0	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	96.9	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	101	23 - 140	
	13C-OCDD	83.7	17 - 157	
	13C-2,3,7,8-TCDF	106	24 - 169	
	13C-1,2,3,7,8-PeCDF	112	24 - 185	
	13C-2,3,4,7,8-PeCDF	116	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	87.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	83.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	86.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	86.9	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	85.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	91.1	26 - 138	
	13C-OCDF	82.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	88.9	35 - 197	

Totals

Total TCDD	ND	0.000000567
Total PeCDD	ND	0.000000789
Total HxCDD	ND	0.00000100
Total HpCDD	ND	0.00000168
Total TCDF	ND	0.000000781
Total PeCDF	ND	0.000000746
Total HxCDF	ND	0.00000112
Total HpCDF	ND	0.00000204

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 09-Oct-2007 13:15

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9453	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	6-Oct-07	Date Analyzed DB-5:	8-Oct-07	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.21	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	93.5	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.5	35 - 71		13C-1,2,3,7,8-PeCDD	94.6	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	50.1	35 - 82		13C-1,2,3,4,7,8-HxCDD	95.7	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	48.2	38 - 67		13C-1,2,3,6,7,8-HxCDD	91.7	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	48.0	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	105	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.8	35 - 70		13C-OCDD	102	17 - 157	
OCDD	100	99.0	78 - 144		13C-2,3,7,8-TCDF	92.5	24 - 169	
2,3,7,8-TCDF	10.0	9.46	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	97.9	24 - 185	
1,2,3,7,8-PeCDF	50.0	47.2	40 - 67		13C-2,3,4,7,8-PeCDF	93.1	21 - 178	
2,3,4,7,8-PeCDF	50.0	48.3	34 - 80		13C-1,2,3,4,7,8-HxCDF	90.3	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.0	36 - 67		13C-1,2,3,6,7,8-HxCDF	87.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	49.9	42 - 65		13C-2,3,4,6,7,8-HxCDF	89.5	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	50.4	35 - 78		13C-1,2,3,7,8,9-HxCDF	89.9	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	49.4	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	91.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	53.6	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	104	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	50.2	39 - 69		13C-OCDF	97.4	17 - 157	
OCDF	100	99.4	63 - 170	CRS	37Cl-2,3,7,8-TCDD	83.7	35 - 197	

Analyst: JMH

Approved By: Martha M. Maier 09-Oct-2007 13:15

Sample ID: **IQI2054-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	TestAmerica	Matrix:	Aqueous	Lab Sample:	29590-001	Date Received:	25-Sep-07
Project:	IQI2054	Sample Size:	0.979 L	QC Batch No.:	9453	Date Extracted:	6-Oct-07
Date Collected:	22-Sep-07			Date Analyzed DB-5:	8-Oct-07	Date Analyzed DB-225:	NA
Time Collected:	1249						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.00000152		
1,2,3,7,8-PeCDD	0.00000312			J
1,2,3,4,7,8-HxCDD	0.00000477			J
1,2,3,6,7,8-HxCDD	0.00000913			J
1,2,3,7,8,9-HxCDD	0.00000827			J
1,2,3,4,6,7,8-HpCDD	0.000231			
OCDD	0.00378			B
2,3,7,8-TCDF	ND	0.00000214		
1,2,3,7,8-PeCDF	ND	0.00000236		
2,3,4,7,8-PeCDF	ND	0.00000231		
1,2,3,4,7,8-HxCDF	ND	0.00000336		
1,2,3,6,7,8-HxCDF	ND	0.00000318		
2,3,4,6,7,8-HxCDF	ND	0.00000340		
1,2,3,7,8,9-HxCDF	ND	0.00000464		
1,2,3,4,6,7,8-HpCDF	0.0000425			
1,2,3,4,7,8,9-HpCDF	ND	0.00000594		
OCDF	0.000137			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.8	25 - 164	
	13C-1,2,3,7,8-PeCDD	92.4	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	80.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	79.0	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	91.7	23 - 140	
	13C-OCDD	82.2	17 - 157	
	13C-2,3,7,8-TCDF	89.6	24 - 169	
	13C-1,2,3,7,8-PeCDF	96.5	24 - 185	
	13C-2,3,4,7,8-PeCDF	95.4	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	77.2	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	72.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	72.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	78.1	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	78.7	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	91.7	26 - 138	
	13C-OCDF	81.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	90.4	35 - 197	

Totals

Total TCDD	ND	0.00000152	
Total PeCDD	0.00000312		
Total HxCDD	0.0000529		0.0000753
Total HpCDD	0.000659		
Total TCDF	ND	0.00000214	
Total PeCDF	ND		0.00000854
Total HxCDF	0.0000326		0.0000387
Total HpCDF	0.000109		

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: Martha M. Maier 09-Oct-2007 13:15

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

SUBCONTRACT ORDER

TestAmerica - Irvine, CA

IQI2054

29590

0.4°C

SENDING LABORATORY:

TestAmerica - Irvine, CA
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB
1104 Windfield Way
El Dorado Hills, CA 95762
Phone :(916) 673-1520
Fax: (916) 673-0106
Project Location: California
Receipt Temperature: 0.4 °C Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: IQI2054-01	**Water**		Sampled: **09/22/07 12:49**	**temp=60.8, pH=6.89**
1613-Dioxin-HR-Alta	ug/l	09/25/07	09/29/07 12:49	J flags,17 congeners,no TEQ,ug/L,sub=Vista
Containers Supplied:				
1 L Amber (C)	1 L Amber (D)			

Released By	Date/Time	Received By	Date/Time
	9-24-07/17:20	Bethina L Benedict	9/25/07 1241

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 29590 TAT unspecified

Samples Arrival:	**Date/Time** 9/25/07 0836	**Initials:** BSB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 9/25/07 1248	**Initials:** BSB	**Location:** WR-2 **Shelf/Rack:** B-4

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		
Temp °C 0.4	**Time:** 0848		**Thermometer ID:** IR-1			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill / Trk # 790344101655	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine, CA 92614
Attention: Nicholas Marz

Phone: (949) 261-1022
Fax: (949) 260-3297

Report Date: 09/28/07 15:35
Received Date: 09/24/07 09:00
Turn Around: Normal

Work Order #: 7092404

Client Project: IQI2054

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Nicholas Marz :

Enclosed are the results of analyses for samples received 09/24/07 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 2.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Kim G Tu

Project Manager

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092404
Project ID: IQI2054

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQI2054-01	Client		7092404-01	Water	09/22/07 12:49

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092404
Project ID: IQI2054

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:35

IQI2054-01 7092404-01 (Water) Date Sampled: 09/22/07 12:49

Metals by EPA 200 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed		Data Qualifiers
Mercury, Dissolved	ND	0.025	ug/l	0.10	1	EPA 245.1	W7I1160	09/27/07	09/27/07	jlp	
Mercury, Total	ND	0.025	ug/l	0.10	1	EPA 245.1	W7I1160	09/27/07	09/27/07	jlp	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092404
Project ID: IQI2054

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:35

QUALITY CONTROL SECTION

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092404
Project ID: IQI2054

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:35

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7I1160 - EPA 245.1										
Blank (W7I1160-BLK1)				Analyzed: 09/27/07						
Mercury, Total	ND	0.10	ug/l							
Mercury, Dissolved	ND	0.10	ug/l							
LCS (W7I1160-BS1)				Analyzed: 09/27/07						
Mercury, Total	1.05	0.10	ug/l	1.00		105	85-115			
Mercury, Dissolved	1.05	0.10	ug/l	1.00		105	85-115			
Matrix Spike (W7I1160-MS1)	**Source: 7092457-10**			Analyzed: 09/27/07						
Mercury, Total	1.07	0.10	ug/l	1.00	ND	107	70-130			
Mercury, Dissolved	1.07	0.10	ug/l	1.00	ND	107	70-130			
Matrix Spike (W7I1160-MS2)	**Source: 7092457-11**			Analyzed: 09/27/07						
Mercury, Total	1.04	0.10	ug/l	1.00	ND	104	70-130			
Mercury, Dissolved	1.04	0.10	ug/l	1.00	ND	104	70-130			
Matrix Spike Dup (W7I1160-MSD1)	**Source: 7092457-10**			Analyzed: 09/27/07						
Mercury, Total	1.05	0.10	ug/l	1.00	ND	105	70-130	2	20	
Mercury, Dissolved	1.05	0.10	ug/l	1.00	ND	105	70-130	2	20	
Matrix Spike Dup (W7I1160-MSD2)	**Source: 7092457-11**			Analyzed: 09/27/07						
Mercury, Total	1.04	0.10	ug/l	1.00	ND	104	70-130	0	20	
Mercury, Dissolved	1.04	0.10	ug/l	1.00	ND	104	70-130	0	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092404
Project ID: IQI2054

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:35

Notes and Definitions

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Weck Laboratories, Inc
Kim G Tu, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SUBCONTRACT ORDER

TestAmerica - Irvine, CA

IQI2054 7092404

SENDING LABORATORY:

TestAmerica - Irvine, CA
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Weck Laboratories, Inc-SUB
14859 E. Clark Avenue
City of Industry, CA 91745
Phone :(626) 336-2139
Fax: (626) 336-2634
Project Location: California
Receipt Temperature:_____°C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IQI2054-01	**Water**		Sampled: **09/22/07 12:49**	**temp=60.8, pH=6.89**
Level 4 Data Package - Wec	N/A	09/25/07	10/20/07 12:49	
Mercury - 245.1, Diss -OUT	mg/l	09/25/07	10/20/07 12:49	Weck, Boeing, J flags
Mercury - 245.1-OUT	mg/l	09/25/07	10/20/07 12:49	Weck,Boeing, permit, J flags, if result>ND,call TA

Containers Supplied:
125 mL Poly w/HNO3 (L)
~~500~~ 125 mL Poly w/HNO3 (M)

Released By Date/Time 9/24/7 900

Released By Date/Time

Received By Date/Time 9/24/7 705

Received By Date/Time 9/24/07 900

2.3

NPDES-429

APPENDIX G

Section 11

Outfall 010, September 22, 2007

MEC^X Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX, LLC
12260 East Vassar Drive
Suite 500
Lakewood, CO 80226

Package ID: IQI2053
Task Order: 1261.100D.00 001
SDG No.: IQI2053
No. of Analyses: 1

Laboratory: Vista Analytical
Reviewer: E. Wessling
Analysis/Method: Dioxins/Furans

Date: Oct. 31, 2007
Reviewer's Signature:

ACTION ITEMS[a]	
. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	Qualifications were assigned for the following:
Holding Times	- Blank qualifications
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	

COMMENTS[b]	

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC[X]
12269 East Vassar Drive
Aurora, CO 80014

Task Order: 1261.100D.00
SDG No.: IQI2053
No. of Analyses: 1

Laboratory: TesAmerica, Weck
Reviewer: P. Meeks
Analysis/Method: Metals, General Minerals

Date: October 21, 2007
Reviewer's Signature

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	Detect below the reporting limit qualified as estimated.
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	

COMMENTS[b]	

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IQI2053

Prepared by

MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	IQI2053
Project Manager:	P. Costa
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
Outfall 010	IQI2053-01	7092403-01	Water	9/22/07 0902	160.2, 314.0, 245.1, 1613

II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at TestAmerica-Irvine and the sub-laboratory, Weck, within the temperature limits of 4°C ±2°C. The sample was received at the sub-laboratory, Vista, below the temperature limit at 0.4°C; however, as the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative for this SDG, the sample was received intact at all laboratories. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered to TestAmerica-Irvine, custody seals were not required. Custody seals were intact upon arrival at sub-laboratories, Weck and Vista. The client ID was added to the sample result summaries by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. EPA METHOD 1613—Dioxin/Furans

Reviewed By: E. Wessling
Date Reviewed: 10/21/2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0), USEPA Method 1613*, and the *National Functional Guidelines Chlorinated Dioxin/Furan Data Review* (8/02).

- Holding Times: Extraction and analytical holding times were met. The water sample was extracted and analyzed within one year of collection.

- Instrument Performance: Instrument performance criteria were met. Following are findings associated with instrument performance.

    - GC Column Performance: A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards. No adverse affect was observed with this practice. The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%.

    - Mass Spectrometer Performance: The mass spectrometer performance was acceptable with the static resolving power greater than 10,000.

- Calibration: Calibration criteria were met.

    - Initial Calibration: Initial calibration criteria were met. The initial calibration was acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the Method 1613 QC limits for all standards.

    - Continuing Calibration: Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits.

- Blanks: The method blank had a detect for OCDD above the EDL. The concentration reported in Outfall 010 was less than five times the concentration reported in the method blank and was therefore qualified as a nondetect, "U," at the reporting limit.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the acceptance criteria listed in Table 6 of Method 1613.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613.

- Compound Identification: Compound identification was verified. The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. No target compounds were detected in the site sample, Outfall 010.

- Compound Quantification and Reported Detection Limits: Compound quantitation was verified by recalculating any sample detects and a representative number of blank spike concentrations. The laboratory calculated and reported compound-specific detection limits. Nondetects are valid to the estimated detection limit (EDL).

B. EPA METHODS 7470A—Mercury

Reviewed By: P. Meeks
Date Reviewed: October 21, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 245.1*, and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The analytical holding time, 28 days for mercury, was met.

- Tuning: As mercury was not analyzed by 6020, mass spectrometer tuning is not applicable.

- Calibration: Calibration criteria were met. Mercury initial calibration r^2 values were $\geq$0.995 and all initial and continuing calibration recoveries were within 85-115%.

- Blanks: There were no applicable detects in the method blanks or CCBs.

- Interference Check Samples: As mercury was not analyzed by 6020, the interference check sample is not applicable.

- Blank Spikes and Laboratory Control Samples: The recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCD results.

- Serial Dilution: No serial dilution analyses were performed.

- Internal Standards Performance: As mercury was not analyzed by 6020, internal standard performance is not applicable.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Detects reported below the reporting limit were qualified as estimated and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

C. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: October 21, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 160.2 and 314.0*, and the *National Functional Guidelines for Inorganic Data Review* (2/94).

- Holding Times: The analytical holding times, 7 days for TSS and 28 days for perchlorate, were met.

- Calibration: Calibration criteria were met. Perchlorate initial calibration r^2 values were ≥0.995 and all initial and continuing calibration, ICCS, and IPC recoveries were within 90-110%. The IPC-MA was recovered within 85-115%.

- Blanks: Method blanks and CCBs had no detects.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Reported nondetects are valid to the reporting limit.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

Sample ID:	IQI2053-01	Outfall 010			EPA Method 1613

Client Data		Sample Data		Laboratory Data			
Name:	TestAmerica	Matrix:	Aqueous	Lab Sample:	29589-001	Date Received:	25-Sep-07
Project:	IQI2053	Sample Size:	1.01 L	QC Batch No.:	9453	Date Extracted:	6-Oct-07
Date Collected:	22-Sep-07			Date Analyzed DB-5:	9-Oct-07	Date Analyzed DB-225:	NA
Time Collected:	0900						

Analyte	Conc. (ug/L)		DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	U	0.000000838		
1,2,3,7,8-PeCDD	ND		0.000000989		
1,2,3,4,7,8-HxCDD	ND		0.00000326		
1,2,3,6,7,8-HxCDD	ND		0.00000154		
1,2,3,7,8,9-HxCDD	ND		0.00000148		
1,2,3,4,6,7,8-HpCDD	ND		0.00000299		
OCDD	0.0000176	U/B			J,B
2,3,7,8-TCDF	ND	U	0.000000991		
1,2,3,7,8-PeCDF	ND		0.00000101		
2,3,4,7,8-PeCDF	ND		0.000000970		
1,2,3,4,7,8-HxCDF	ND		0.00000154		
1,2,3,6,7,8-HxCDF	ND		0.00000148		
2,3,4,6,7,8-HxCDF	ND		0.00000167		
1,2,3,7,8,9-HxCDF	ND		0.00000232		
1,2,3,4,6,7,8-HpCDF	ND		0.00000292		
1,2,3,4,7,8,9-HpCDF	ND		0.00000272		
OCDF	ND		0.00000295		

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	98.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	88.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	80.5	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	94.1	23 - 140	
	13C-OCDD	84.8	17 - 157	
	13C-2,3,7,8-TCDF	89.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	97.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	98.5	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	75.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	75.1	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	73.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	77.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
	13C-OCDF	79.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	97.3	35 - 197	

Totals				
Total TCDD	ND	U	0.000000838	
Total PeCDD	ND		0.000000989	
Total HxCDD	ND		0.00000209	
Total HpCDD	ND		0.00000299	
Total TCDF	ND		0.000000991	
Total PeCDF	ND		0.000000990	
Total HxCDF	ND		0.00000175	
Total HpCDF	ND		0.00000282	

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: William J. Luksemburg 09-Oct-2007 13:19

Level IV

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

OUTFALL 010

IQI2053-01 7092403-01 (Water)

Date Sampled: 09/22/07 09:00

Metals by EPA 200 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed		Data Qualifiers
Mercury, Dissolved J/DNQ	**0.041**	0.025	ug/l	0.10	1	EPA 245.1	W7I1130	09/26/07	09/27/07	jlp	J
Mercury, Total U	ND	0.025	ug/l	0.10	1	EPA 245.1	W7I1130	09/26/07	09/27/07	jlp	

LEVEL IV

Weck Laboratories, Inc
Kim G Tu, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
17461 Derian Avenue, Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: IQI2053

Sampled: 09/22/07
Received: 09/22/07

INORGANICS

Analyte		Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2053-01 (Outfall 010 - Water) - cont.										
Reporting Units: mg/l										
Chloride	*	EPA 300.0	7I24057	5.0	10	**150**	20	09/24/07	09/24/07	
Nitrate/Nitrite-N		EPA 300.0	7I24057	0.15	0.26	**1.0**	1	09/24/07	09/24/07	H
Oil & Grease		EPA 413.1	7I25056	1.1	4.7	**1.3**	1	09/25/07	09/25/07	Ja
Sulfate		EPA 300.0	7I24057	0.20	0.50	**50**	1	09/24/07	09/24/07	
Total Dissolved Solids		SM2540C	7I27118	10	10	**590**	1	09/27/07	09/27/07	
Total Suspended Solids	U	EPA 160.2	7I25131	10	10	ND	1	09/25/07	09/25/07	
Sample ID: IQI2053-01 (Outfall 010 - Water)										
Reporting Units: ug/l										
Perchlorate	U	EPA 314.0	7J03062	1.5	4.0	ND	1	10/03/07	10/03/07	

* Analysis not validated

LEVEL IV

TestAmerica - Irvine, CA

Joseph Doak
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

APPENDIX G

Section 12

Outfall 010, September 22, 2007

Test America Analytical Laboratory Report

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project: Routine Outfall 010

Sampled: 09/22/07
Received: 09/22/07
Issued: 10/16/07 09:20

NELAP #01108CA California ELAP#1197 CSDLAC #10256

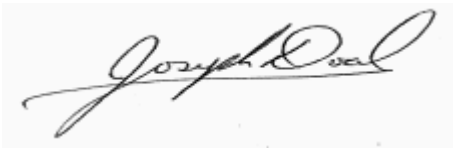
The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
IQI2053-01	Outfall 010	Water

Reviewed By:



TestAmerica - Irvine, CA

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: IQI2053

Sampled: 09/22/07
Received: 09/22/07

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2053-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	7I25136	0.20	2.0	**0.57**	1	09/25/07	09/26/07	Ja
Cadmium	EPA 200.8	7I25136	0.11	1.0	ND	1	09/25/07	09/26/07	
Copper	EPA 200.8	7I25136	0.75	2.0	ND	1	09/25/07	09/26/07	
Lead	EPA 200.8	7I25136	0.10	1.0	ND	1	09/25/07	09/26/07	
Thallium	EPA 200.8	7I25136	0.15	1.0	ND	1	09/25/07	09/26/07	

TestAmerica - Irvine, CA

Joseph Doak
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: IQI2053

Sampled: 09/22/07
Received: 09/22/07

DISSOLVED METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2053-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8-Diss	7I24137	0.20	2.0	**0.63**	1	09/24/07	09/25/07	Ja
Cadmium	EPA 200.8-Diss	7I24137	0.11	1.0	ND	1	09/24/07	09/25/07	
Copper	EPA 200.8-Diss	7I24137	0.75	2.0	ND	1	09/24/07	09/25/07	
Lead	EPA 200.8-Diss	7I24137	0.10	1.0	**0.16**	1	09/24/07	09/25/07	Ja
Thallium	EPA 200.8-Diss	7I24137	0.15	1.0	ND	1	09/24/07	09/25/07	

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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: IQI2053

Sampled: 09/22/07
Received: 09/22/07

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2053-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	7I24057	5.0	10	**150**	20	09/24/07	09/24/07	
Nitrate/Nitrite-N	EPA 300.0	7I24057	0.15	0.26	**1.0**	1	09/24/07	09/24/07	H
Oil & Grease	EPA 413.1	7I25056	1.1	4.7	**1.3**	1	09/25/07	09/25/07	Ja
Sulfate	EPA 300.0	7I24057	0.20	0.50	**50**	1	09/24/07	09/24/07	
Total Dissolved Solids	SM2540C	7I27118	10	10	**590**	1	09/27/07	09/27/07	
Total Suspended Solids	EPA 160.2	7I25131	10	10	ND	1	09/25/07	09/25/07	
Sample ID: IQI2053-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	7J03062	1.5	4.0	ND	1	10/03/07	10/03/07	

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Metals by EPA 200 Series Methods

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IQI2053-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Mercury, Dissolved	EPA 245.1	W7I1130	0.025	0.10	**0.041**	1	09/26/07	09/27/07	J
Mercury, Total	EPA 245.1	W7I1130	0.025	0.10	ND	1	09/26/07	09/27/07	

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Sampled: 09/22/07
Received: 09/22/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 010 (IQI2053-01) - Water					
EPA 300.0	2	09/22/2007 09:00	09/22/2007 16:05	09/24/2007 07:00	09/24/2007 11:01

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I25136 Extracted: 09/25/07											
Blank Analyzed: 09/26/2007 (7I25136-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 09/26/2007 (7I25136-BS1)											
Antimony	83.2	2.0	0.20	ug/l	80.0		104	85-115			
Cadmium	81.4	1.0	0.11	ug/l	80.0		102	85-115			
Copper	83.8	2.0	0.75	ug/l	80.0		105	85-115			
Lead	80.5	1.0	0.10	ug/l	80.0		101	85-115			
Thallium	84.6	1.0	0.15	ug/l	80.0		106	85-115			
Matrix Spike Analyzed: 09/26/2007 (7I25136-MS1)						**Source: IQI2053-01**					
Antimony	83.3	2.0	0.20	ug/l	80.0	0.569	103	70-130			
Cadmium	78.0	1.0	0.11	ug/l	80.0	ND	98	70-130			
Copper	80.0	2.0	0.75	ug/l	80.0	ND	100	70-130			
Lead	76.1	1.0	0.10	ug/l	80.0	ND	95	70-130			
Thallium	80.4	1.0	0.15	ug/l	80.0	ND	100	70-130			
Matrix Spike Analyzed: 09/26/2007 (7I25136-MS2)						**Source: IQI1869-04**					
Antimony	81.3	2.0	0.20	ug/l	80.0	0.881	101	70-130			
Cadmium	73.3	1.0	0.11	ug/l	80.0	ND	92	70-130			
Copper	82.3	2.0	0.75	ug/l	80.0	5.95	95	70-130			
Lead	70.4	1.0	0.10	ug/l	80.0	0.706	87	70-130			
Thallium	70.7	1.0	0.15	ug/l	80.0	ND	88	70-130			
Matrix Spike Dup Analyzed: 09/26/2007 (7I25136-MSD1)						**Source: IQI2053-01**					
Antimony	82.0	2.0	0.20	ug/l	80.0	0.569	102	70-130	2	20	
Cadmium	77.3	1.0	0.11	ug/l	80.0	ND	97	70-130	1	20	
Copper	78.7	2.0	0.75	ug/l	80.0	ND	98	70-130	2	20	
Lead	73.0	1.0	0.10	ug/l	80.0	ND	91	70-130	4	20	
Thallium	77.8	1.0	0.15	ug/l	80.0	ND	97	70-130	3	20	

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Received: 09/22/07

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24137 Extracted: 09/24/07											
Blank Analyzed: 09/25/2007 (7I24137-BLK1)											
Antimony	ND	2.0	0.20	ug/l							
Cadmium	ND	1.0	0.11	ug/l							
Copper	ND	2.0	0.75	ug/l							
Lead	ND	1.0	0.10	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 09/25/2007 (7I24137-BS1)											
Antimony	85.3	2.0	0.20	ug/l	80.0		107	85-115			
Cadmium	87.6	1.0	0.11	ug/l	80.0		110	85-115			
Copper	78.2	2.0	0.75	ug/l	80.0		98	85-115			
Lead	81.2	1.0	0.10	ug/l	80.0		102	85-115			
Thallium	80.8	1.0	0.15	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 09/25/2007 (7I24137-MS1)						**Source: IQI2053-01**					
Antimony	88.1	2.0	0.20	ug/l	80.0	0.630	109	70-130			
Cadmium	83.8	1.0	0.11	ug/l	80.0	ND	105	70-130			
Copper	76.1	2.0	0.75	ug/l	80.0	ND	95	70-130			
Lead	80.5	1.0	0.10	ug/l	80.0	0.157	100	70-130			
Thallium	79.5	1.0	0.15	ug/l	80.0	ND	99	70-130			
Matrix Spike Dup Analyzed: 09/25/2007 (7I24137-MSD1)						**Source: IQI2053-01**					
Antimony	88.4	2.0	0.20	ug/l	80.0	0.630	110	70-130	0	20	
Cadmium	83.0	1.0	0.11	ug/l	80.0	ND	104	70-130	1	20	
Copper	75.5	2.0	0.75	ug/l	80.0	ND	94	70-130	1	20	
Lead	80.1	1.0	0.10	ug/l	80.0	0.157	100	70-130	1	20	
Thallium	79.4	1.0	0.15	ug/l	80.0	ND	99	70-130	0	20	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 010
Report Number: IQI2053

Sampled: 09/22/07
Received: 09/22/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I24057 Extracted: 09/24/07											
Blank Analyzed: 09/24/2007 (7I24057-BLK1)											
Chloride	ND	0.50	0.25	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.15	mg/l							
Sulfate	ND	0.50	0.20	mg/l							
LCS Analyzed: 09/24/2007 (7I24057-BS1)											
Chloride	4.85	0.50	0.25	mg/l	5.00		97	90-110			
Sulfate	9.78	0.50	0.20	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 09/24/2007 (7I24057-MS1)						**Source: IQI2057-01**					
Chloride	8.67	0.50	0.25	mg/l	5.00	4.37	86	80-120			
Sulfate	20.5	0.50	0.20	mg/l	10.0	11.3	92	80-120			
Matrix Spike Dup Analyzed: 09/24/2007 (7I24057-MSD1)						**Source: IQI2057-01**					
Chloride	8.64	0.50	0.25	mg/l	5.00	4.37	85	80-120	0	20	
Sulfate	20.5	0.50	0.20	mg/l	10.0	11.3	92	80-120	0	20	
Batch: 7I25056 Extracted: 09/25/07											
Blank Analyzed: 09/25/2007 (7I25056-BLK1)											
Oil & Grease	ND	5.0	1.2	mg/l							
LCS Analyzed: 09/25/2007 (7I25056-BS1)											**MNR1**
Oil & Grease	20.2	5.0	1.2	mg/l	20.0		101	65-120			
LCS Dup Analyzed: 09/25/2007 (7I25056-BSD1)											
Oil & Grease	20.0	5.0	1.2	mg/l	20.0		100	65-120	1	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7I25131 Extracted: 09/25/07											
Blank Analyzed: 09/25/2007 (7I25131-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 09/25/2007 (7I25131-BS1)											
Total Suspended Solids	1060	10	10	mg/l	1000		106	85-115			
Duplicate Analyzed: 09/25/2007 (7I25131-DUP1)						**Source: IQI1885-01**					
Total Suspended Solids	30.0	10	10	mg/l		28.0			7	10	
Batch: 7I27118 Extracted: 09/27/07											
Blank Analyzed: 09/27/2007 (7I27118-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 09/27/2007 (7I27118-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 09/27/2007 (7I27118-DUP1)						**Source: IQI2053-01**					
Total Dissolved Solids	589	10	10	mg/l		588			0	10	
Batch: 7J03062 Extracted: 10/03/07											
Blank Analyzed: 10/03/2007 (7J03062-BLK1)											
Perchlorate	ND	4.0	1.5	ug/l							
LCS Analyzed: 10/03/2007 (7J03062-BS1)											
Perchlorate	51.7	4.0	1.5	ug/l	50.0		103	85-115			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7J03062 Extracted: 10/03/07											
Matrix Spike Analyzed: 10/03/2007 (7J03062-MS1)						**Source: IQI2029-08**					
Perchlorate	47.0	4.0	1.5	ug/l	50.0	ND	94	80-120			
Matrix Spike Dup Analyzed: 10/03/2007 (7J03062-MSD1)						**Source: IQI2029-08**					
Perchlorate	49.7	4.0	1.5	ug/l	50.0	ND	99	80-120	6	20	

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METHOD BLANK/QC DATA

Metals by EPA 200 Series Methods

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: W7I1130 Extracted: 09/26/07											
Blank Analyzed: 09/27/2007 (W7I1130-BLK1)											
Mercury, Dissolved	ND	0.10	0.025	ug/l							
Mercury, Total	ND	0.10	0.025	ug/l							
LCS Analyzed: 09/27/2007 (W7I1130-BS1)											
Mercury, Dissolved	0.966	0.10	0.025	ug/l	1.00		97	85-115			
Mercury, Total	0.966	0.10	0.025	ug/l	1.00		97	85-115			
Matrix Spike Analyzed: 09/27/2007 (W7I1130-MS1)						**Source: 7092108-05**					
Mercury, Dissolved	0.988	0.10	0.025	ug/l	1.00	ND	99	70-130			
Mercury, Total	0.988	0.10	0.025	ug/l	1.00	ND	99	70-130			
Matrix Spike Analyzed: 09/27/2007 (W7I1130-MS2)						**Source: 7092108-06**					
Mercury, Dissolved	0.929	0.10	0.025	ug/l	1.00	ND	93	70-130			
Mercury, Total	0.929	0.10	0.025	ug/l	1.00	ND	93	70-130			
Matrix Spike Dup Analyzed: 09/27/2007 (W7I1130-MSD1)						**Source: 7092108-05**					
Mercury, Dissolved	0.982	0.10	0.025	ug/l	1.00	ND	98	70-130	1	20	
Mercury, Total	0.982	0.10	0.025	ug/l	1.00	ND	98	70-130	1	20	
Matrix Spike Dup Analyzed: 09/27/2007 (W7I1130-MSD2)						**Source: 7092108-06**					
Mercury, Dissolved	0.930	0.10	0.025	ug/l	1.00	ND	93	70-130	0	20	
Mercury, Total	0.930	0.10	0.025	ug/l	1.00	ND	93	70-130	0	20	

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Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IQI2053-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.32	4.7	15
IQI2053-01	Antimony-200.8	Antimony	ug/l	0.57	2.0	6.00
IQI2053-01	Antimony-200.8, Diss	Antimony	ug/l	0.63	2.0	6.00
IQI2053-01	Cadmium-200.8	Cadmium	ug/l	0.050	1.0	4.00
IQI2053-01	Cadmium-200.8, Diss	Cadmium	ug/l	0.077	1.0	4.00
IQI2053-01	Chloride - 300.0	Chloride	mg/l	148	10	150
IQI2053-01	Copper-200.8	Copper	ug/l	0.63	2.0	14
IQI2053-01	Copper-200.8, Diss	Copper	ug/l	0.55	2.0	14
IQI2053-01	Lead-200.8	Lead	ug/l	0.049	1.0	5.20
IQI2053-01	Lead-200.8, Diss	Lead	ug/l	0.16	1.0	5.20
IQI2053-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.05	0.26	10.00
IQI2053-01	Sulfate-300.0	Sulfate	mg/l	50	0.50	250
IQI2053-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	588	10	850
IQI2053-01	Thallium-200.8	Thallium	ug/l	0.088	1.0	2.00
IQI2053-01	Thallium-200.8, Diss	Thallium	ug/l	0.067	1.0	2.00

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DATA QUALIFIERS AND DEFINITIONS

H	Sample analysis performed past method-specified holding time.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
Ja	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 200.8-Diss	Water	X	X
EPA 200.8	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 413.1	Water	X	X
SM2540C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

Subcontracted Laboratories

Vista Analytical *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*
1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta
Samples: IQI2053-01

Weck Laboratories, Inc
14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 245.1
Samples: IQI2053-01

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Project Manager

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IQI 2053

Del Mar Analytical Version 04/28/06 CHAIN OF CUSTODY FORM

IQI 2053 Page 1 of 1

Client Name/Address:	Project:
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Boeing-SSFL NPDES **Routine Outfall 010** Stormwater at Building 203
Project Manager: Bronwyn Kelly Sampler: BRANDT	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle * #	Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Total Dissolved Metals: Sb, Cd, Cu, Pb, Hg, Tl				Comments
Outfall 010	W	Poly-1L	1	9-22-07 09:00	HNO3	1A	X									Field readings: Temp = 69.1 pH= 7.92 Collected @ 09:00
Outfall 010-Dup	W	Poly-1L	1		HNO3	1B	X									
Outfall 010	W	Amber-1L	2		None	2A, 2B		X								
Outfall 010	W	Amber-1L	2		HCl	3A, 3B			X							
Outfall 010	W	Poly-500 ml	2		None	4A, 4B				X						
Outfall 010	W	Poly-500 ml	2		None	5A, 5B					X					
Outfall 010	W	Poly-1L	1		None	6						X				Filter w/in 24hr of receipt at lab

ANALYSIS REQUIRED

Relinquished By	Date/Time:	Received By	Date/Time:
	9-22-07 1345	[signature]	9/22/07 1345
[signature]	9/22/07 1605		9/22/07 1605

Turn around Time: (check)
24 Hours _____ 5 Days ✓
48 Hours _____ 10 Days _____
72 Hours _____ Normal _____
Perchlorate Only 72 Hours_____
Metals Only 72 Hours_____
Sample Integrity: (Check)
Intact X On Ice: ✓

NPDES-461

Vista
Analytical Laboratory

October 09, 2007

Vista Project I.D.: 29589

Mr. Nicholas Marz
TestAmerica
17461 Derian Ave.
Suite 100
Irvine, CA 92614

Dear Mr. Marz,

Enclosed are the results for the one aqueous sample received at Vista Analytical Laboratory on September 25, 2007 under your Project Name "IQI2053". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Vista's current certifications, and copies of the raw data (if requested).

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com. Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha M. Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista Analytical Laboratory.

Section I: Sample Inventory Report

Date Received: **9/25/2007**

Vista Lab. ID	Client Sample ID
29589-001	IQI2053-01

SECTION II

Method Blank **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9453	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	6-Oct-07	Date Analyzed DB-5:	9-Oct-07
				Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000567		
1,2,3,7,8-PeCDD	ND	0.000000789		
1,2,3,4,7,8-HxCDD	ND	0.00000150		
1,2,3,6,7,8-HxCDD	ND	0.000000769		
1,2,3,7,8,9-HxCDD	ND	0.000000741		
1,2,3,4,6,7,8-HpCDD	ND	0.00000168		
OCDD	0.0000168			J
2,3,7,8-TCDF	ND	0.000000781		
1,2,3,7,8-PeCDF	ND	0.000000768		
2,3,4,7,8-PeCDF	ND	0.000000724		
1,2,3,4,7,8-HxCDF	ND	0.00000102		
1,2,3,6,7,8-HxCDF	ND	0.000000993		
2,3,4,6,7,8-HxCDF	ND	0.00000106		
1,2,3,7,8,9-HxCDF	ND	0.00000140		
1,2,3,4,6,7,8-HpCDF	ND	0.00000208		
1,2,3,4,7,8,9-HpCDF	ND	0.00000199		
OCDF	ND	0.00000225		

Labeled Standard		%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	100	25 - 164	
	13C-1,2,3,7,8-PeCDD	108	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	99.0	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	96.9	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	101	23 - 140	
	13C-OCDD	83.7	17 - 157	
	13C-2,3,7,8-TCDF	106	24 - 169	
	13C-1,2,3,7,8-PeCDF	112	24 - 185	
	13C-2,3,4,7,8-PeCDF	116	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	87.6	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	83.5	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	86.7	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	86.9	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	85.5	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	91.1	26 - 138	
	13C-OCDF	82.0	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	88.9	35 - 197	

Totals		
Total TCDD	ND	0.000000567
Total PeCDD	ND	0.000000789
Total HxCDD	ND	0.00000100
Total HpCDD	ND	0.00000168
Total TCDF	ND	0.000000781
Total PeCDF	ND	0.000000746
Total HxCDF	ND	0.00000112
Total HpCDF	ND	0.00000204

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: William J. Luksemburg 09-Oct-2007 13:19

OPR Results **EPA Method 1613**

Matrix:	Aqueous	QC Batch No.:	9453	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	6-Oct-07	Date Analyzed DB-5:	8-Oct-07	Date Analyzed DB-225:	NA

Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits		Labeled Standard	%R	LCL-UCL	Qualifier
2,3,7,8-TCDD	10.0	9.21	6.7 - 15.8	IS	13C-2,3,7,8-TCDD	93.5	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.5	35 - 71		13C-1,2,3,7,8-PeCDD	94.6	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	50.1	35 - 82		13C-1,2,3,4,7,8-HxCDD	95.7	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	48.2	38 - 67		13C-1,2,3,6,7,8-HxCDD	91.7	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	48.0	32 - 81		13C-1,2,3,4,6,7,8-HpCDD	105	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.8	35 - 70		13C-OCDD	102	17 - 157	
OCDD	100	99.0	78 - 144		13C-2,3,7,8-TCDF	92.5	24 - 169	
2,3,7,8-TCDF	10.0	9.46	7.5 - 15.8		13C-1,2,3,7,8-PeCDF	97.9	24 - 185	
1,2,3,7,8-PeCDF	50.0	47.2	40 - 67		13C-2,3,4,7,8-PeCDF	93.1	21 - 178	
2,3,4,7,8-PeCDF	50.0	48.3	34 - 80		13C-1,2,3,4,7,8-HxCDF	90.3	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.0	36 - 67		13C-1,2,3,6,7,8-HxCDF	87.1	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	49.9	42 - 65		13C-2,3,4,6,7,8-HxCDF	89.5	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	50.4	35 - 78		13C-1,2,3,7,8,9-HxCDF	89.9	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	49.4	39 - 65		13C-1,2,3,4,6,7,8-HpCDF	91.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	53.6	41 - 61		13C-1,2,3,4,7,8,9-HpCDF	104	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	50.2	39 - 69		13C-OCDF	97.4	17 - 157	
OCDF	100	99.4	63 - 170	CRS	37Cl-2,3,7,8-TCDD	83.7	35 - 197	

Analyst: JMH

Approved By: William J. Luksemburg 09-Oct-2007 13:19

Sample ID: **IQI2053-01** **EPA Method 1613**

Client Data		Sample Data		Laboratory Data			
Name:	TestAmerica	Matrix:	Aqueous	Lab Sample:	29589-001	Date Received:	25-Sep-07
Project:	IQI2053	Sample Size:	1.01 L	QC Batch No.:	9453	Date Extracted:	6-Oct-07
Date Collected:	22-Sep-07			Date Analyzed DB-5:	9-Oct-07	Date Analyzed DB-225:	NA
Time Collected:	0900						

Analyte	Conc. (ug/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.000000838		
1,2,3,7,8-PeCDD	ND	0.000000989		
1,2,3,4,7,8-HxCDD	ND	0.00000326		
1,2,3,6,7,8-HxCDD	ND	0.00000154		
1,2,3,7,8,9-HxCDD	ND	0.00000148		
1,2,3,4,6,7,8-HpCDD	ND	0.00000299		
OCDD	0.0000176			J,B
2,3,7,8-TCDF	ND	0.000000991		
1,2,3,7,8-PeCDF	ND	0.00000101		
2,3,4,7,8-PeCDF	ND	0.000000970		
1,2,3,4,7,8-HxCDF	ND	0.00000154		
1,2,3,6,7,8-HxCDF	ND	0.00000148		
2,3,4,6,7,8-HxCDF	ND	0.00000167		
1,2,3,7,8,9-HxCDF	ND	0.00000232		
1,2,3,4,6,7,8-HpCDF	ND	0.00000292		
1,2,3,4,7,8,9-HpCDF	ND	0.00000272		
OCDF	ND	0.00000295		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.2	25 - 164	
	13C-1,2,3,7,8-PeCDD	98.8	25 - 181	
	13C-1,2,3,4,7,8-HxCDD	88.8	32 - 141	
	13C-1,2,3,6,7,8-HxCDD	80.5	28 - 130	
	13C-1,2,3,4,6,7,8-HpCDD	94.1	23 - 140	
	13C-OCDD	84.8	17 - 157	
	13C-2,3,7,8-TCDF	89.1	24 - 169	
	13C-1,2,3,7,8-PeCDF	97.8	24 - 185	
	13C-2,3,4,7,8-PeCDF	98.5	21 - 178	
	13C-1,2,3,4,7,8-HxCDF	75.7	26 - 152	
	13C-1,2,3,6,7,8-HxCDF	75.1	26 - 123	
	13C-2,3,4,6,7,8-HxCDF	73.8	28 - 136	
	13C-1,2,3,7,8,9-HxCDF	76.8	29 - 147	
	13C-1,2,3,4,6,7,8-HpCDF	77.8	28 - 143	
	13C-1,2,3,4,7,8,9-HpCDF	86.1	26 - 138	
	13C-OCDF	79.8	17 - 157	
CRS	37Cl-2,3,7,8-TCDD	97.3	35 - 197	

Totals		
Total TCDD	ND	0.000000838
Total PeCDD	ND	0.000000989
Total HxCDD	ND	0.00000209
Total HpCDD	ND	0.00000299
Total TCDF	ND	0.000000991
Total PeCDF	ND	0.000000990
Total HxCDF	ND	0.00000175
Total HpCDF	ND	0.00000282

Footnotes

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

Analyst: JMH

Approved By: William J. Luksemburg 09-Oct-2007 13:19

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
P	**The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.**
H	**The signal-to-noise ratio is greater than 10:1.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q

SUBCONTRACT ORDER

TestAmerica - Irvine, CA

IQI2053

29589

0.4°C

SENDING LABORATORY:

TestAmerica - Irvine, CA
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Vista Analytical Laboratory- SUB
1104 Windfield Way
El Dorado Hills, CA 95762
Phone :(916) 673-1520
Fax: (916) 673-0106
Project Location: California
Receipt Temperature: 0.4 °C Ice: (Y) N

Analysis	Units	Due	Expires	Comments
Sample ID: IQI2053-01	**Water**		Sampled: **09/22/07 09:00**	
1613-Dioxin-HR-Alta	ug/l	10/01/07	09/29/07 09:00	J flags,17 congeners,no TEQ,ug/L,sub=Vista

Containers Supplied:
IQI2053-01C & 02D 2-1LAMBERS

~~Released By~~ 9/24/07 17:10 Bethnia Benedict 9/25/07 1241
~~Released By~~ Date/Time Received By Date/Time

Released By Date/Time Received By Date/Time

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 29589 TAT unspecified

Samples Arrival:	**Date/Time** 9/25/07 0836	**Initials:** BSB	**Location:** WR-2 **Shelf/Rack:** N/A
Logged In:	**Date/Time** 9/25/07 1244	**Initials:** BSB	**Location:** WR-2 **Shelf/Rack:** B-4

Delivered By:	(FedEx)	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		
Temp °C 0.4	**Time:** 0848		**Thermometer ID:** IR-1			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill Trk # 790344101655	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?			
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	Vista	(Client)	Retain	(Return)	Dispose

Comments:

SUBCONTRACT ORDER

TestAmerica - Irvine, CA

IQI2053 7092403

SENDING LABORATORY:

TestAmerica - Irvine, CA
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 260-3297
Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Weck Laboratories, Inc-SUB
14859 E. Clark Avenue
City of Industry, CA 91745
Phone :(626) 336-2139
Fax: (626) 336-2634
Project Location: California
Receipt Temperature:_____°C Ice: Y / N

Analysis	Units	Due	Expires	Comments
Sample ID: IQI2053-01	**Water**		Sampled: 09/22/07 09:00	
Level 4 Data Package - Wec	N/A	10/01/07	10/20/07 09:00	
Mercury - 245.1, Diss -OUT	mg/l	10/01/07	10/20/07 09:00	Weck, Boeing, J flags
Mercury - 245.1-OUT	mg/l	10/01/07	10/20/07 09:00	Weck,Boeing, permit, J flags, if result>ND,call TA

Containers Supplied:

125 mL Poly w/HNO3 (L)
500 mL Poly w/HNO3 (M)

Released By	Date/Time	Received By	Date/Time
Released By	Date/Time	Received By	Date/Time

9/24/7 705
9/24/7 900
9/24/07 900
2.3°

NPDES-473

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine, CA 92614
Attention: Nicholas Marz

Phone: (949) 261-1022
Fax: (949) 260-3297

Report Date: 09/28/07 15:38
Received Date: 09/24/07 09:00
Turn Around: Normal

Work Order #: 7092403

Client Project: IQI2053

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Nicholas Marz :

Enclosed are the results of analyses for samples received 09/24/07 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 2.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Kim G Tu

Project Manager

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQI2053-01	Client		7092403-01	Water	09/22/07 09:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

IQI2053-01 7092403-01 (Water) Date Sampled: 09/22/07 09:00

Metals by EPA 200 Series Methods

Analyte	Result	MDL	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed		Data Qualifiers
Mercury, Dissolved	**0.041**	0.025	ug/l	0.10	1	EPA 245.1	W7I1130	09/26/07	09/27/07	jlp	J
Mercury, Total	ND	0.025	ug/l	0.10	1	EPA 245.1	W7I1130	09/26/07	09/27/07	jlp	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

QUALITY CONTROL SECTION

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine
17461 Derian Ave, Suite 100
Irvine CA, 92614

Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7I1130 - EPA 245.1										
Blank (W7I1130-BLK1)				Analyzed: 09/27/07						
Mercury, Total	ND	0.10	ug/l							
Mercury, Dissolved	ND	0.10	ug/l							
LCS (W7I1130-BS1)				Analyzed: 09/27/07						
Mercury, Total	0.966	0.10	ug/l	1.00		97	85-115			
Mercury, Dissolved	0.966	0.10	ug/l	1.00		97	85-115			
Matrix Spike (W7I1130-MS1)	**Source: 7092108-05**			Analyzed: 09/27/07						
Mercury, Total	0.988	0.10	ug/l	1.00	ND	99	70-130			
Mercury, Dissolved	0.988	0.10	ug/l	1.00	ND	99	70-130			
Matrix Spike (W7I1130-MS2)	**Source: 7092108-06**			Analyzed: 09/27/07						
Mercury, Total	0.929	0.10	ug/l	1.00	ND	93	70-130			
Mercury, Dissolved	0.929	0.10	ug/l	1.00	ND	93	70-130			
Matrix Spike Dup (W7I1130-MSD1)	**Source: 7092108-05**			Analyzed: 09/27/07						
Mercury, Total	0.982	0.10	ug/l	1.00	ND	98	70-130	0.6	20	
Mercury, Dissolved	0.982	0.10	ug/l	1.00	ND	98	70-130	0.6	20	
Matrix Spike Dup (W7I1130-MSD2)	**Source: 7092108-06**			Analyzed: 09/27/07						
Mercury, Total	0.930	0.10	ug/l	1.00	ND	93	70-130	0.1	20	
Mercury, Dissolved	0.930	0.10	ug/l	1.00	ND	93	70-130	0.1	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Report ID: 7092403
Project ID: IQI2053

Date Received: 09/24/07 09:00
Date Reported: 09/28/07 15:38

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

Weck Laboratories, Inc
Kim G Tu, Project Manager

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